

### **REMARKS**

Applicants appreciate the thorough examination of the present application as evidenced by the Office Action mailed December 16, 2008 (hereinafter "Office Action"). In response, Applicant has amended independent Claim 1 to clarify the relationships between the container that has the spent nuclear fuel therein and the electrochemical cell that allows metal oxides contained in the spent nuclear fuel to be reduced to metallic form. Applicants respectfully submit that the cited reference does not disclose or suggest, at least, the recitations of independent Claim 1 as amended. In view of the above-described amendments and following remarks, Applicants respectfully submit that all pending claims are in condition for allowance. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter.

#### **Independent Claim is Patentable**

Independent Claim 1 stands rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 5,378,325 to Dastolfo, Jr. et al. (hereinafter "Dastolfo") (Office Action, page 2). Independent Claim 1 is directed to an apparatus and recites, as amended, in part:

- a container having spent nuclear fuel therein;
- an electrochemical cell in the container which comprises:
  - a body or housing;
  - a cathode container; and
  - a cathode connector;
- wherein said body or housing is maintained as the cathode, and said electrochemical cell is free from bolted or screwed fittings; and
- wherein said body or housing is configured to connect with the spent nuclear fuel so as to reduce to metallic form metal oxides contained in the spent nuclear fuel, which are responsive to a voltage applied thereto.

According to independent Claim 1, as amended, a container has spent nuclear fuel therein along with an electrochemical cell. The electrochemical cell comprises a body or housing that is maintained as a cathode and is configured to connect with the spent nuclear fuel to facilitate reduction of metal oxides contained in the spent nuclear fuel to metallic form. Dastolfo teaches the use of a low temperature salt bath for the electrolysis of metal oxides to produce the corresponding metal. That bath includes a first salt containing at least one

fluoride salt, and a second salt containing at least one chloride salt. The preferred process includes an anode consisting essentially of carbonaceous material. (Dastolfo, Abstract). In sharp contrast with the recitations of independent Claim 1 as amended, however, Dastolfo is directed to the production of aluminum from its oxide and does not include any disclosure or suggestion of a container that has spent nuclear fuel therein along with an electrochemical cell that has a body or housing that connects with the spent nuclear fuel so as to facilitate the electrolytic process.

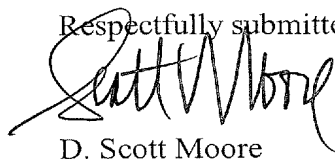
For at least the foregoing reasons, Applicants respectfully submit that independent Claim 1 is patentable over Dastolfo and that dependent Claims 2 - 12 are patentable at least by virtue of their depending from an allowable claim.

#### **Dependent Claims Are Patentable**

As each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicants do not believe that it is necessary to argue the allowability of each dependent claim individually. Applicants do not necessarily concur with the interpretation of these claims, or with the bases for rejection set forth in the Office Action. Applicants therefore reserve the right to address the patentability of these claims individually as necessary in the future.

#### **CONCLUSION**

In light of the above amendment and remarks, Applicants respectfully submits that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

Respectfully submitted,  
  
D. Scott Moore

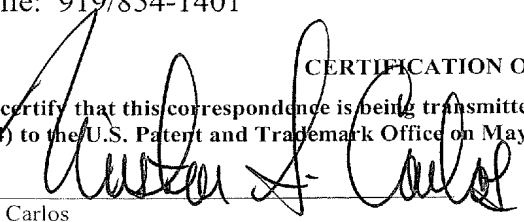
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**CERTIFICATION OF TRANSMISSION**

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4) to the U.S. Patent and Trademark Office on May 18, 2009.

  
Kirsten S Carlos